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File 344: Chinese Patents Abs Aug 1985-2004/Mar
         (c) 2004 European Patent Office
File 347: JAPIO Nov 1976-2003/Nov (Updated 040308)
         (c) 2004 JPO & JAPIO
File 350: Derwent WPIX 1963-2004/UD, UM &UP=200419
         (c) 2004 Thomson Derwent
? ds
Set
        Items
                Description
                ((COMMUNICATION? OR TELECOMMUNICATION? OR PACKET?)()NETWOR-
        53927
S1
             K?)
           46
S2
                S1(5N)(SERVICE OR SERVICES)(3N)(LEVEL OR LEVELS OR HIEARAC-
             H? OR TIER? OR RANK?)
                (METERED OR METER OR METERS OR METERING) (5N) (USAGE? OR UTI-
S3
             LIZ? OR UTILIS? OR USE? ? OR USING)
              (MEASUR? OR MONITOR? OR ESTIMAT? OR CALCULAT? OR DETERMIN?
S4
             OR DETECT?) (5N) (USAGE? OR UTILIZ? OR UTILIS? OR USE? ? OR USI-
                (TARIFF? OR BILLING? OR CHARGING OR CHARGE OR CHARGES OR P-
S5
             RICE OR PRICES OR COST OR COSTS OR FEE OR FEES OR RATE OR RAT-
             ES) (5N) (USAGE? OR UTILIZ? OR UTILIS? OR USE? ? OR USING)
                (METERED OR METER OR METERS OR METERING) (5N) (TARIFF? OR BI-
S6
             LLING? OR CHARGING OR CHARGE OR CHARGES OR PRICE OR PRICES OR
              COST OR COSTS OR FEE OR FEES OR RATE OR RATES)
         2675
                (MONITOR? OR DETERMIN? OR SELECT? OR VERIF?) (3N) (ELIGIB? OR
S7
              SCHEDUL?)
           52
                AU=(BRISCOE, R? OR BRISCOE R? OR RIZZO, M? OR RIZZO M ?)
S8
                S2 AND (S3 OR S4 OR S5 OR S6)
S9
                S9 AND IC=G06F
S10
            0
                S9 AND S7
S11
S12
            0
                S2 AND S8
```

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(Item 1 from file: 350)
DIALOG(R) File 350: Derwent WPIX
(c) 2004 Thomson Derwent. All rts. reserv.
            **Image available**
015812242
WPI Acc No: 2003-874446/200381
XRPX Acc No: N03-698159
            level agreement measurement performance method in data
  Service
  communication
                 network , involves calculating service
  agreement parameter based on local ingress stamp, remote egress and local
  egress stamp
Patent Assignee: ATRICA IRELAND LTD (ATRI-N)
Inventor: KLUGER Y; LAHAT A; OFEK R; SHABTAY L
Number of Countries: 001 Number of Patents: 001
Patent Family:
                                                   Date
                                                            Week
                             Applicat No
                                            Kind
Patent No
            Kind
                     Date
              B1 20031104 US 2001894666
                                                 20010628 200381 B
                                            Α
US 6643612
Priority Applications (No Type Date): US 2001894666 A 20010628
Patent Details:
Patent No Kind Lan Pg
                        Main IPC
                                     Filing Notes
                  20 G06F-003/00
US 6643612
             В1
Abstract (Basic): US 6643612 B1
        NOVELTY - A service level agreement (SLA) measurement request
    message including local ingress stamp, is send to remote device through
    network. An SLA measurement response message including remote egress
    stamp is send by remote device to local device. A local egress stamp is
    generated by local device, upon receipt of response message. SLA
    parameter is calculated using local ingress/egress stamp and remote
    egress stamp.
        DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the
    following:
        (1) network device;
        (2) protocol for use in performing service level agreement; and
        (3) computer program product for use in network device.
        USE - For performing service level agreement measurements for
    calculating end to end delay, round trip delay, one way jitter and
    bandwidth calculations in data communication network.
        ADVANTAGE - Provides the necessary reporting capabilities which is
    scalable over large number of connections, without placing undue burden
    on processing resources of network devices.
        DESCRIPTION OF DRAWING(S) - The figure shows the block diagram of
    an access device.
        access device (30)
        user port (32)
        network port (36)
        ingress packet process (42)
        egress packet processor (44)
        pp; 20 DwgNo 2/8
Title Terms: SERVICE; LEVEL; AGREE; MEASURE; PERFORMANCE; METHOD; DATA;
  COMMUNICATE; NETWORK; CALCULATE; SERVICE; LEVEL; AGREE; PARAMETER; BASED;
  LOCAL; INGRESS; STAMP; REMOTE; EGRESS; LOCAL; EGRESS; STAMP
Derwent Class: T01
International Patent Class (Main): G06F-003/00
File Segment: EPI
 10/5/2
            (Item 2 from file: 350)
DIALOG(R) File 350: Derwent WPIX
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(c) 2004 Thomson Derwent. All rts. reserv.

\*\*Image available\*\* 015682796 WPI Acc No: 2003-744985/200370 XRPX Acc No: N03-596718 Content provision method for communication network, involves automatically downloading user selected content from network when cost of service calculated with respect to network congestion is less than user specified service threshold cost Patent Assignee: LITWIN L R (LITW-I); THOMSON LICENSING SA (CSFC ) Inventor: LITWIN L R Number of Countries: 102 Number of Patents: 002 Patent Family: Patent No Kind Date Applicat No Kind Date Week US 20030145098 A1 20030731 US 200257008 Α 20020125 200370 B WO 200365741 A1 20030807 WO 2003US2028 Α 20030123 200370 Priority Applications (No Type Date): US 200257008 A 20020125 Patent Details: Patent No Kind Lan Pg Main IPC Filing Notes US 20030145098 A1 12 G06F-015/16 H04Q-007/20 WO 200365741 A1 E Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SC SD SE SG SK SL TJ TM TN TR TT TZ UA UG US UZ VC VN Designated States (Regional): AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS LU MC MW MZ NL OA PT SD SE SI SK SL SZ TR TZ UG ZM ZW Abstract (Basic): US 20030145098 A1 NOVELTY - The method involves providing cost of service to network device e.g. personal digital assistant (230a-230c) based on communication network congestion. The user-selected content is automatically downloaded from the network when the determined cost of service is less than service threshold cost specified by user . DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for communication system. USE - For providing content to devices such as personal digital assistant (PDA), computer, cellular phone connected to communication network. ADVANTAGE - Enables to adapt cost of service for communication network based on level of network congestion. DESCRIPTION OF DRAWING(S) - The figure shows the block diagram of the communication system. network devices (230a-230c) pp; 12 DwgNo 2/4 Title Terms: CONTENT; PROVISION; METHOD; COMMUNICATE; NETWORK; AUTOMATIC; USER; SELECT; CONTENT; NETWORK; COST; SERVICE; CALCULATE; RESPECT; NETWORK; CONGESTED; LESS; USER; SPECIFIED; SERVICE; THRESHOLD; COST Derwent Class: T01; W01 International Patent Class (Main): G06F-015/16; H04Q-007/20 File Segment: EPI (Item 3 from file: 350) DIALOG(R) File 350: Derwent WPIX

(c) 2004 Thomson Derwent. All rts. reserv.

\*\*Image available\*\*

015598836

WPI Acc No: 2003-660991/200362

XRPX Acc No: N03-527275

Telecommunication network management system, has service level objective monitor that determines parameter values satisfying objective status and initiates action defined for that objective if violation is detected

Patent Assignee: COMPAQ INFORMATION TECHNOLOGIES INC (COPQ )

Inventor: FLAUW M; LAYE C T

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No Kind Date Applicat No Kind Date Week US 20030120771 A1 20030626 US 2002133299 A 20020426 200362 B

Priority Applications (No Type Date): EP 2001403343 A 20011221

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

US 20030120771 A1 15 G06F-015/16

Abstract (Basic): US 20030120771 A1

NOVELTY - The system has a service level objective (SLO) monitor that receives primary and secondary parameter values from a data collector and from a performance data manager, respectively. The SLO monitor verifies whether the parameter values satisfy the parameter objectives and initiates action defined for that objective if violation is detected.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a method for continuously monitoring compliance with a service level agreement.

USE - **Used** for **monitoring** of service quality in telecommunication networks.

 ${\tt ADVANTAGE}$  - The service level objective monitor provides real-time monitoring of compliance of a service level agreement.

DESCRIPTION OF DRAWING(S) - The drawing shows a meta-model for a service level agreement.

pp; 15 DwgNo 6/9

Title Terms: TELECOMMUNICATION; NETWORK; MANAGEMENT; SYSTEM; SERVICE; LEVEL; OBJECTIVE; MONITOR; DETERMINE; PARAMETER; VALUE; SATISFY; OBJECTIVE;

STATUS; INITIATE; ACTION; DEFINE; OBJECTIVE; VIOLATION; DETECT

Derwent Class: T01; W01

International Patent Class (Main): G06F-015/16

File Segment: EPI

## 10/5/4 (Item 4 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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014761952 \*\*Image available\*\*
WPI Acc No: 2002-582656/200262
Related WPI Acc No: 2002-582655

XRPX Acc No: N02-462042

Data processor for goods service management using communication network e.g. Internet, calculates predicted stock level data for item using current stock level data, stock replenishment data and stock demand data

Patent Assignee: ITT MFG ENTERPRISES INC (INTT )

Inventor: ARAM P R

Number of Countries: 027 Number of Patents: 005

Patent Family:

Patent No Kind Date Applicat No Kind Date Week

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US 20020072988 A1 20020613 US 2001810125
                                                  20010316 200262 B
                                             Α
                             US 2001909620
                                                 20010719
                                            Α
                   20020619
              Α
                             GB 20015744
                                                           200262
GB 2370135
                                            Α
                                                 20010308
EP 1215606
              Α1
                  20020619
                            EP 2001310037
                                            Α
                                                 20011130
                                                           200262
                            EP 2001310158
EP 1215607
              A2
                  20020619
                                            A
                                                 20011205
                                                           200262
GB 2370132
                   20020619 GB 200030422
              Α
                                            Α
                                                 20001213
                                                           200262
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Priority Applications (No Type Date): GB 20015744 A 20010308; GB 200030422 A 20001213

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

US 20020072988 A1 51 G06F-017/60 CIP of application US 2001810125

GB 2370135 A G06F-017/60

EP 1215606 A1 E G06F-017/60

Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR

EP 1215607 A2 E G06F-017/60

Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR

GB 2370132 A G06F-017/60

Abstract (Basic): US 20020072988 A1

NOVELTY - The processor is coupled to a stock level data store which has current stock level data, stock demand data and stock replenishment data. The processor calculates a predicted stock level data for an item using data from the stock level data store. The predicted stock level data includes date/time and predicted number of stock units available for meeting a demand. The processor graphically outputs the changes in predicted stock level data over the future time period.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for the following:

- (1) Stock planning tool; and
- (2) Supply planning method.

USE - For managing goods/services for demand planning using communication network e.g. Internet, intranet, extranet.

ADVANTAGE - Allows a supplier to operate efficiently, thereby enabling faster and automatic delivery of goods to the distributor at a lower cost to meet the required data promised to the customer, this allows the customer lead time and level of the inventory held by the distributor to be reduced effectively.

DESCRIPTION OF DRAWING(S) - The figure shows a schematic view of the data processor.

pp; 51 DwgNo 1b/24

Title Terms: DATA; PROCESSOR; GOODS; SERVICE; MANAGEMENT; COMMUNICATE; NETWORK; CALCULATE; PREDICT; STOCK; LEVEL; DATA; ITEM; CURRENT; STOCK; LEVEL; DATA; STOCK; REPLENISH; DATA; STOCK; DEMAND; DATA

Derwent Class: T01

International Patent Class (Main): G06F-017/60

File Segment: EPI

### 10/5/5 (Item 5 from file: 350)

DIALOG(R) File 350: Derwent WPIX

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014522039 \*\*Image available\*\*
WPI Acc No: 2002-342742/200238

XRPX Acc No: N02-269503

Configuration of a peripheral for processing of electronic documents in a communication network, uses user data to access level of service

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available to that user on a network and prepares configuration from user
  data and service level data
Patent Assignee: CANON RES CENT FRANCE SA (CANO ); DELUMEAU F (DELU-I);
  DIAS H (DIAS-I); MOREAU J (MORE-I)
Inventor: DELUMEAU F; DIAS H; MOREAU J J; MOREAU J
Number of Countries: 002 Number of Patents: 002
Patent Family:
Patent No
             Kind
                     Date
                             Applicat No
                                            Kind
                                                   Date
                                                            Week
FR 2813409
              A1 20020301 FR 200011027
                                                 20000829
                                                           200238
                                             Α
US 20020078337 A1 20020620 US 2001923360
                                             Α
                                                  20010808 200244
Priority Applications (No Type Date): FR 200011027 A 20000829
Patent Details:
Patent No Kind Lan Pq
                        Main IPC
                                     Filing Notes
             A1 45 G06F-013/10
FR 2813409
US 20020078337 A1
                        G06F-001/24
Abstract (Basic): FR 2813409 A1
        NOVELTY - The peripheral configuration uses a profile formed from
    configuration parameters for that peripheral. The profile is created by
    obtaining (504) identification data from the user, determining
    (506) the level of service allowed for that user , and determination
    (508) as a function of the level of service, of a configuration profile
    to be applied to configure the peripheral.
        USE - Individual configuration of networked peripherals for
    printing and scanning of documents.
        ADVANTAGE - Allows adaptation of the configuration of a peripheral
    accessible over a network to the user's requirements.
        DESCRIPTION OF DRAWING(S) - The drawing shows a flow diagram (the
    drawing contains non-English language text).
        Obtain identification data (504)
        Determine level of service (506)
        Determine configuration profile (508)
       pp; 45 DwgNo 5/9
Title Terms: CONFIGURATION; PERIPHERAL; PROCESS; ELECTRONIC; DOCUMENT;
  COMMUNICATE; NETWORK; USER; DATA; ACCESS; LEVEL; SERVICE; AVAILABLE; USER
  ; NETWORK; PREPARATION; CONFIGURATION; USER; DATA; SERVICE; LEVEL; DATA
Derwent Class: T01; T04; W01
International Patent Class (Main): G06F-001/24; G06F-013/10
International Patent Class (Additional): G06F-003/12; G06F-009/00;
  G06F-009/24; G06F-015/177; H04L-012/28
File Segment: EPI
            (Item 6 from file: 350)
10/5/6
DIALOG(R) File 350: Derwent WPIX
(c) 2004 Thomson Derwent. All rts. reserv.
013979304
             **Image available**
WPI Acc No: 2001-463518/200150
XRPX Acc No: N01-343613
  Customer interfacing method in hybrid communication
                                                        network , involves
  generating events based on customer inquiry and service
                                                            level
  agreement and delivering suitable response to customers
Patent Assignee: AC PROPERTIES BV (ACPR-N)
Inventor: BOWMAN-AMUAH M K
Number of Countries: 001 Number of Patents: 001
Patent Family:
Patent No
             Kind
                    Date
                            Applicat No
                                           Kind
                                                  Date
                                                           Week
             B1 20010227 US 99324982
US 6195697
                                            Α
                                                19990602
                                                          200150 B
```

Priority Applications (No Type Date): US 99324982 A 19990602 Patent Details:
Patent No Kind Lan Pg Main IPC Filing Notes

Patent No Kind Lan Pg Main IPC Filing Note US 6195697 B1 73 G06F-015/173

Abstract (Basic): US 6195697 B1

NOVELTY - The method involves receiving inquiries directly from hybrid network customers and events are generated based on stored service level agreement and customer inquiry. A response relating to network performance information is output to customer, if the customer inquiry relates to network performance. The customer is also made to notify about the planned maintenance outage of network.

DETAILED DESCRIPTION - The service level agreement of hybrid network customers are received and stored initially. The inquires which are directly received from the hybrid network customers reflects the occurrences related to hybrid network. An INDEPENDENT CLAIM is also included for hybrid network customers interfacing system.

USE - For customer interface management in hybrid communication network e.g. PSTN wireless network, etc.

ADVANTAGE - By generating events based on customer inquiry and service level agreement, sufficient and relevant information to verify compliance/non-compliance to service level agreement is provided and also sufficient usage information for rating and billing is provided. Provides suitable service management control and intimates about hardware failure etc., beforehand to customer.

DESCRIPTION OF DRAWING(S) - The figure shows the block diagram of network data management system.

pp; 73 DwgNo 1B/20

Title Terms: CUSTOMER; INTERFACE; METHOD; HYBRID; COMMUNICATE; NETWORK; GENERATE; EVENT; BASED; CUSTOMER; ENQUIRY; SERVICE; LEVEL; AGREE; DELIVER; SUIT; RESPOND; CUSTOMER

Derwent Class: T01; W01

International Patent Class (Main): G06F-015/173

File Segment: EPI

10/5/7 (Item 7 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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012104720 \*\*Image available\*\*
WPI Acc No: 1998-521632/199844

XRPX Acc No: N98-407394

Process management infra-structure for system use in object-oriented programming environment esp. telecommunications - uses process tags containing name of executable file and arguments for process in network

Patent Assignee: CROSSKEYS SYSTEMS CORP (CROS-N)

Inventor: WACLAWIK R

Number of Countries: 081 Number of Patents: 004

Patent Family:

Patent No Kind Date Applicat No Kind Date WO 9842157 A2 19980924 WO 98CA231 Α 19980316 199844 B Α 19980316 199907 AU 9864912 19981012 AU 9864912 Α CA 2200010 Α 19980914 CA 2200010 Α 19970314 199928 A2 20000712 EP 98910543 19980316 200036 EP 1018255 Α WO 98CA231 Α 19980316

Priority Applications (No Type Date): CA 2200010 A 19970314

Cited Patents: No-SR.Pub

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes WO 9842157 A2 E 14 H04Q-011/00

Designated States (National): AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH GM GW HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW

Designated States (Regional): AT BE CH DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG ZW

AU 9864912 A H04Q-011/00 Based on patent WO 9842157

CA 2200010 A H04L-012/26

EP 1018255 A2 E H04L-029/06 Based on patent WO 9842157 Designated States (Regional): DE FR GB IT SE

## Abstract (Basic): WO 9842157 A

The infrastructure is for a system for use in an object-oriented programming environment, and comprises means for running multiple processes, a director for monitoring their operation, and a database for storing process tags uniquely identifying each instance of a process.

The means for running the processes does so by looking up the respective process tags in the database. It also has an inter-process communication component for sending messages to various processes to control system operation.

USE - Particularly for monitoring compliance with service
level agreements in telecommunications network .

ADVANTAGE - System provides high system availability with improved flexibility. E.g. enables new network manager to be added to system simply by starting up another instance of process. No need to copy and rename executable files.

Dwg.1/2

Title Terms: PROCESS; MANAGEMENT; INFRA; STRUCTURE; SYSTEM; OBJECT; ORIENT; PROGRAM; ENVIRONMENT; TELECOMMUNICATION; PROCESS; TAG; CONTAIN; NAME; EXECUTE; FILE; ARGUMENT; PROCESS; NETWORK

Derwent Class: W01

International Patent Class (Main): H04L-012/26; H04L-029/06; H04Q-011/00

International Patent Class (Additional): G06F-009/44

File Segment: EPI

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(Item 1 from file: 348)
DIALOG(R) File 348: EUROPEAN PATENTS
(c) 2004 European Patent Office. All rts. reserv.
Session subscription system and method for same
Vorrichtung und Verfahren zur Kommunikationssitzungsabonnement
Dispositif et procede d'enregistrement a une session
PATENT ASSIGNEE:
  AT&T WIRELESS SERVICES, INC., (2133692), 14520 N.E. 87th Street, Redmond,
    WA 98052, (US), (Applicant designated States: all)
INVENTOR:
  Chien, Herman, 17706 NE 134th Place, Redmond, WA 98052, (US)
LEGAL REPRESENTATIVE:
  Suckling, Andrew Michael (77593), Marks & Clerk, 4220 Nash Court, Oxford
    Business Park South, Oxford OX4 2RU, (GB)
                             EP 1113629 A2
                                              010704 (Basic)
PATENT (CC, No, Kind, Date):
                              EP 1113629 A3
                                             031105
                              EP 2000311492 001220;
APPLICATION (CC, No, Date):
PRIORITY (CC, No, Date): US 474839 991230
DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI;
  LU; MC; NL; PT; SE; TR
EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI
INTERNATIONAL PATENT CLASS: H04L-012/56
ABSTRACT WORD COUNT: 171
NOTE:
  Figure number on first page: 1
LANGUAGE (Publication, Procedural, Application): English; English
FULLTEXT AVAILABILITY:
                                     Word Count
Available Text Language
                           Update
                           200127
                                      1132
      CLAIMS A (English)
                           200127
                                      4817
      SPEC A
                (English)
                                      5949
Total word count - document A
Total word count - document B
                                         0
Total word count - documents A + B
                                      5949
...SPECIFICATION request server. The session server receives a request for
  a specified QOS. The session server determines the resources available
  for use with the access facility, and allocates resources sufficient to
  support the requested QOS. The advantage...
...access facility. In fact, the session server can be used to allocate
  resources for user services in multiple communication
                                                            networks
  the same level of service . Such a function supports a network
  tunneling function, such as when messages, originated in a...
             (Item 2 from file: 348)
 9/3, K/2
DIALOG(R) File 348: EUROPEAN PATENTS
(c) 2004 European Patent Office. All rts. reserv.
00769692
DATA TRANSMISSION METHOD IN A TDMA MOBILE COMMUNICATION SYSTEM
VERFAHREN ZUR DATENUBERTRAGUNG IN EINEM MOBILEN TDMA-KOMMUNIKATIONSSYSTEM
PROCEDE DE TRANSMISSIONS DE DONNEES DANS UN SYSTEME DE TELECOMMUNICATIONS
    MOBILES AMRT
PATENT ASSIGNEE:
  Nokia Corporation, (3988870), Keilalahdentie 4, 02150 Espoo, (FI),
```

(Proprietor designated states: all)

```
INVENTOR:
  HAMALAINEN, Jari, Matti Tapionkatu 1 F 17, FIN-33720 Tampere, (FI)
  VAINIKKA, Jari, Neilikkakuja 5 B, FIN-01300 Vantaa, (FI)
  HONKASALO, Zhi-Chun, Haravakuja 12, FIN-01660 Vantaa, (FI) JOKINEN, Harri, Vahahiidentie 450, FIN-25370 Hiisi, (FI)
  POSTI, Harri, Rantakatu 14 B 17, FIN-90120 Oulu, (FI)
LEGAL REPRESENTATIVE:
  Akras, Tapio Juhani et al (81831), Oy Kolster Ab, Iso Roobertinkatu 23,
P.O. Box 148, 00121 Helsinki, (FI)
PATENT (CC, No, Kind, Date): EP 783826 A2 970716 (Basic)
                                 EP 783826 B1 030402
                                 WO 96010320 960404
                                EP 95932031 950926; WO 95FI526 950926
APPLICATION (CC, No, Date):
PRIORITY (CC, No, Date): FI 944487 940927
DESIGNATED STATES: AT; BE; CH; DE; DK; ES; FR; GB; GR; IE; IT; LI; LU; MC;
  NL: PT: SE
INTERNATIONAL PATENT CLASS: H04Q-007/22
NOTE:
  No A-document published by EPO
LANGUAGE (Publication, Procedural, Application): English; English;
FULLTEXT AVAILABILITY:
                                        Word Count
                             Update
Available Text Language
                             200314
                                         1532
      CLAIMS B (English)
                                          1139
                             200314
                  (German)
      CLAIMS B
                   (French)
                             200314
                                          1826
      CLAIMS B
                  (English) 200314
                                          4620
      SPEC B
Total word count - document A
Total word count - document B
                                          9117
Total word count - documents A + B
                                          9117
```

- ...SPECIFICATION multi-slot access technique when a channel configuration that meets the maximum requirements for the **user** data transfer **rate** is not available. This may take place during call set-up or handover. The mobile...
- ...by transmitting the serving mobile communication network the minimum and the maximum requirements for the **user** data transfer **rate**, in addition to the presently specified parameters used for establishing a data call. These requirements...
- ...of service determines the data transfer rate the mobile station wishes to be able to **use**. Simultaneously, the desired data transfer **rate** is the maximum data transfer rate to be allowed for the mobile station. With this...
- ...station may select the appropriate parameters. These parameters, i.e. the required and the desired level of service, allow the mobile communication network to vary the data transfer rates of individual mobile stations in accordance with the needs...

# 9/3,K/3 (Item 1 from file: 349)

DIALOG(R) File 349: PCT FULLTEXT

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01054017 \*\*Image available\*\*

METHOD AND ARRANGEMENT FOR DINAMIC ALLOCATION OF NETWORK RESOURCES
PROCEDE ET AGENCEMENT PERMETTANT L'ATTRIBUTION DYNAMIQUE DE RESSOURCE DE
RESEAU

Patent Applicant/Assignee:
MARCONI UK INTELLECTUAL PROPERTY LTD, New Century Park, P.O. Box 53,

Coventry CV3 1HJ, GB, GB (Residence), GB (Nationality), (For all designated states except: US)

Patent Applicant/Inventor:

MOORE Andrew, 21 Jasmine Court, Cambridge CB1 8BG, GB, GB (Residence), GB (Nationality), (Designated only for: US)

Legal Representative:

COCKAYNE Gillian (agent), Marconi Intellectual Property, Marrable House, The Vineyards, Great Baddow, Chelmsford, Essex CM2 7QS, GB,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200384152 A1 20031009 (WO 0384152)

Application: WO 2003GB1372 20030328 (PCT/WO GB0301372)

Priority Application: GB 20027507 20020328

Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SC SD SE SG SK SL TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW (EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LU MC NL PT RO SE SI SK TR

(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English

Filing Language: English Fulltext Word Count: 6639

Fulltext Availability: Detailed Description Claims

## Detailed Description

... of the network, a different level of service being associated with each said class of use, said apparatus comprising: a demand estimator for estimating the demand for each of said plurality of classes of use; a dynamic available resource whilst at the same time ensuring that the level of service of each class is observed; and a communications network element for providing to each class the proportion of network resource allocated to it.

Preferably...

### Claim

- ... of the network, a different level of service being associated with each said class of **use**, said apparatus comprising: a demand **estimator** for estimating the demand for each of said plurality of classes of use; a dynamic...
- ...allocation optimising use of the available resource whilst at the same time ensuring that the **level** of **service** of each class is observed; and a **communications network** element for providing to each class the proportion of network resource allocated to it.

2...

## 9/3,K/4 (Item 2 from file: 349)

DIALOG(R) File 349: PCT FULLTEXT

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01043685 \*\*Image available\*\*

SYSTEM, DEVICE, AND METHOD FOR TRAFFIC AND SUBSCRIBER SERVICE DIFFERENTIATION USING MULTIPROTOCOL LABEL SWITCHING

SYSTEME, DISPOSITIF ET PROCEDE PERMETTANT DE DIFFERENCIER LE LES CLASSES DE TRAFIC ET LES SERVICES POUR ABONNES AU MOYEN D'UNE COMMUTATION MULTIPROTOCOLE AVEC ETIQUETTE (MPLS)

Patent Applicant/Assignee:

NORTEL NETWORKS LIMITED, 2351 Boulevard Alfred-Nobel, St. Laurent, Quebec H4S 2A9, CA, US (Residence), CA (Nationality)

Inventor(s):

HO Ka K, 30 Windcrest Court, Kanata, Ontario K2B1B5, CA, WILBUR Greg A, 180 Powell Avenue, Ottawa, Ontario K1S2A3, CA, FONG Bill B, 36 Lone Meadow Trail, Stittsville, Ontario K2S1E1, CA, Legal Representative:

SUNSTEIN Bruce D (et al) (agent), Bromberg & Sunstein LLP, 125 Summer Street, Boston, MA 02110-1618, US,

Patent and Priority Information (Country, Number, Date):

Patent:

WO 200373709 A1 20030904 (WO 0373709)

Application:

WO 2003US5481 20030221 (PCT/WO US0305481)

Priority Application: US 200281987 20020222

Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SC SD SE SG SK SL TJ TM TN TR TT TZ UA UG UZ VC VN YU ZA ZM ZW (EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LU MC NL PT SE SI SK TR

(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English Filing Language: English Fulltext Word Count: 4762

Fulltext Availability: Detailed Description

Detailed Description

... best effort data, thereby resulting in less delay for the real-time packet.

A multi- service packet network may also offer subscribers different levels of service (i.e., service availability and quality). For example, a telecom carrier typically offers subscribers different levels of service, thereby allowing the telecom carrier to charge subscribers different tariff rates. Carriers can use this flexibility in tariff rates to bid aggressively when dealing with low-end subscribers while also offering excellent service to...

9/3,K/5 (Item 3 from file: 349)

DIALOG(R) File 349:PCT FULLTEXT

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01035658 \*\*Image available\*\*

ADAPTIVE COST OF SERVICE FOR COMMUNICATION NETWORK BASED ON LEVEL OF NETWORK CONGESTION

COUT ADAPTATIF DE SERVICE POUR RESEAU DE COMMUNICATION BASE SUR LE NIVEAU D'ENCOMBREMENT D'UN RESEAU

Patent Applicant/Assignee:

THOMSON LICENSING S A, 46, quai A. Le Gallo, F-92648 Boulogne, FR, FR (Residence), FR (Nationality), (For all designated states except: US) Patent Applicant/Inventor:

LITWIN Louis Robert, 34-14 Quail Ridge Drive, Plainsboro, NJ 08536, US,

US (Residence), US (Nationality), (Designated only for: US) Legal Representative: TRIPOLI Joseph S (et al) (agent), Thomson multimedia Licensing Inc., 2 Independence Way, Suite 2, Princeton, NJ 08540, US, Patent and Priority Information (Country, Number, Date): WO 200365741 A1 20030807 (WO 0365741) Patent: WO 2003US2028 20030123 (PCT/WO US0302028) Application: Priority Application: US 200257008 20020125 Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SC SD SE SG SK SL TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW (EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LU MC NL PT SE SI SK TR (OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG (AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW (EA) AM AZ BY KG KZ MD RU TJ TM Publication Language: English Filing Language: English Fulltext Word Count: 6112 Fulltext Availability: Detailed Description Claims Detailed Description ... to network devices in a communication network. The method includes the step of determining a level of congestion of the communication network . A cost of service is calculated based on the level of congestion. The network devices are informed of the cost of service. A first selection... ...to the network device during a download process. A second selection is received from the user specifying a cost of service threshold for the download process. The cost of service is automatically compared to... Claim ... c) and a network controller for controlling access to the communication network and determining a level of congestion of the communication network (305), calculating a cost of service based on the level of congestion (310) for receiving from one of the network devices a first selection specifying... ...content to be downloaded during a download process and a second selection from the corresponding user specifying a cost of service threshold for the download process (320), automatically comparing the cost of service to ...network devices in a communication network, the method comprising the steps of deten-nining a level of congestion of the communication network (305);calculating a cost of service based on the level of congestion (3 1 infori-ning the network devices of the cost of service...network device during a download process (320); 1 5 receiving a second selection from the user specifying a cost of service threshold for the download process (325); automatically comparing the cost of service to...

(Item 4 from file: 349) 9/3, K/6DIALOG(R) File 349:PCT FULLTEXT (c) 2004 WIPO/Univentio. All rts. reserv. 00754096 \*\*Image available\*\* DEVICE AND METHOD FOR MEASURING THE REQUESTED AND ALLOCATED RESOURCES IN TELECOMMUNICATIONS SYSTEM DISPOSITIF ET PROCEDE PERMETTANT DE MESURER LES RESSOURCES DEMANDEES ET AFFECTEES DANS UN SYSTEME DE COMMUNICATION Patent Applicant/Assignee: NOKIA NETWORKS OY, Keilalahdentie 4, FIN-02150 Espoo, FI, FI (Residence), FI (Nationality), (For all designated states except: US) Patent Applicant/Inventor: SAARINEN Matti, Hatanpaanvaltatie 30, FIN-33101 Tampere, FI, FI (Residence), FI (Nationality), (Designated only for: US) ISOJARVI Seppo, Makisenkentantie 5 A2, FIN-33480 Ylojarvi, FI, FI (Residence), FI (Nationality), (Designated only for: US) TIITINEN Jari, Kalaonnentie 3 D54, FIN-02230 Espoo, FI, FI (Residence), FI (Nationality), (Designated only for: US) OHVO Mikko, Johanbergintie 102, FIN-04660 Numminen, FI, FI (Residence), FI (Nationality), (Designated only for: US) AALTO Petri, Parrinkuja 2, FIN-33920 Pirkkala, FI, FI (Residence), FI (Nationality), (Designated only for: US) MENSIO Armi, Eevankuja 4 a 2, FIN-01400 Vantaa, FI, FI (Residence), FI (Nationality), (Designated only for: US) RANTANEN Markku, Tarttamaentie 106, FIN-44100 Aanekoski, FI, FI (Residence), FI (Nationality), (Designated only for: US) Legal Representative: PELLMANN Hans-Bernd, Tiedtke-Buhling-Kinne et al., Bavariaring 4, D-80336 Munchen, DE Patent and Priority Information (Country, Number, Date): Patent: WO 200067505 A1 20001109 (WO 0067505) WO 99EP3044 19990504 (PCT/WO EP9903044) Application: Designated States: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZA ZW (EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE (OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG (AP) GH GM KE LS MW SD SL SZ UG ZW (EA) AM AZ BY KG KZ MD RU TJ TM Publication Language: English Filing Language: English Fulltext Word Count: 5741 Fulltext Availability: Detailed Description Detailed Description ... Also, the corresponding channel coding is checked. Additionally, the maximum number of channels requested and used is compared. Subsequently, a determining means 5 determines, on the basis of the comparison result by said comparing means 4, whether said used (allocated) bearer service parameters BCIE2 of the communication network are at a lower level than the bearer service parameters BCIE1 requested by the

user equipment UE1. A corresponding check is also made for...

(Item 5 from file: 349) 9/3, K/7DIALOG(R) File 349: PCT FULLTEXT (c) 2004 WIPO/Univentio. All rts. reserv. \*\*Image available\*\* 00465725 PROCESSES AND SYSTEMS FOR DYNAMICALLY MEASURING SWITCH TRAFFIC PROCEDES ET SYSTEMES POUR MESURER LE TRAFIC DE COMMUTATION DE MANIERE DYNAMIQUE Patent Applicant/Assignee: BELLSOUTH CORPORATION, COX Stephen T, Inventor(s): COX Stephen T, Patent and Priority Information (Country, Number, Date): WO 9856190 A2 19981210 (PCT/WO US9811317) WO 98US11317 19980608 Application: Priority Application: US 97870369 19970606; US 9768206 19971219 Designated States: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH GM GW HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW GH GM KE LS MW SD SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN ML MR NE SN TD TG Publication Language: English Fulltext Word Count: 9124 Fulltext Availability: Detailed Description Detailed Description ... A database stores the average usage for a busy hour as well as the traffic usage limit calculated for the switch components. Such traffic data may include busy hour usage, call attempts or...  $\ldots$ access the stored traffic data and generate reports in order to 0 determine whether objective service levels are being met by the communications network . For instance, various network managers may connect to a network information warehouse holding the collected... (Item 6 from file: 349) 9/3,K/8 DIALOG(R) File 349:PCT FULLTEXT

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00451693 \*\*Image available\*\* PROCESS MANAGEMENT INFRASTRUCTURE INFRASTRUCTURE DE GESTION DE PROCESSUS Patent Applicant/Assignee: CROSSKEYS SYSTEMS CORPORATION, WACLAWIK Richard, Inventor(s): WACLAWIK Richard, Patent and Priority Information (Country, Number, Date): WO 9842157 A2 19980924 Patent: WO 98CA231 19980316 (PCT/WO CA9800231) Application: Priority Application: CA 2200010 19970314 Designated States: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH GM GW HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW GH GM KE LS MW SD SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN ML MR NE SN TD TG Publication Language: English Fulltext Word Count: 3316 Fulltext Availability: Detailed Description Detailed Description ... management infrastructure system for use in an object-oriented programming environiment, and in particular for use in a system for monitoring the compliance with service level agreements in a telecommunications network . There is a need for a system to manage service **level** agreements (SLAs) between telecommunications service providers and their business customers. Part of the management process... (Item 7 from file: 349) 9/3, K/9DIALOG(R) File 349: PCT FULLTEXT (c) 2004 WIPO/Univentio. All rts. reserv. \*\*Image available\*\* 00370805 CALL PATTERNS IN A COMMUNICATIONS NETWORK STRUCTURES D'APPELS DANS UN RESEAU DE TELECOMMUNICATIONS Patent Applicant/Assignee: BRITISH TELECOMMUNICATIONS PUBLIC LIMITED COMPANY, LUNN Timothy John, THOMAS Ian Peter, Inventor(s): LUNN Timothy John, THOMAS Ian Peter, Patent and Priority Information (Country, Number, Date): WO 9711547 A1 19970327 WO 96GB2331 19960918 (PCT/WO GB9602331) Application: Priority Application: GB 95306560 19950918 Designated States: AU CA JP US AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL Publication Language: English Fulltext Word Count: 6623 Fulltext Availability:

Detailed Description

Detailed Description

... only 10% would be sufficient to make sure that no calls were blocked.

Traffic analysis using the Erlang formulae to calculate the number of trunks (or call stations) necessary to maintain a specified level of service has been widely reported and used to maintain communication network service levels for a number of years. One form of the Erlang B formula is shown below...

2

File 344: Chinese Patents Abs Aug 1985-2004/Mar (c) 2004 European Patent Office File 347: JAPIO Nov 1976-2003/Nov (Updated 040308) (c) 2004 JPO & JAPIO File 350: Derwent WPIX 1963-2004/UD, UM &UP=200419 (c) 2004 Thomson Derwent File 348:EUROPEAN PATENTS 1978-2004/Mar W03 (c) 2004 European Patent Office File 349:PCT FULLTEXT 1979-2002/UB=20040325,UT=20040318 (c) 2004 WIPO/Univentio ? ds Set Items Description S1 77 AU='BRISCOE R':AU='BRISCOE RODERICK E' S2 20 S1 AND (COMMUNICATION?()NETWORK?) S3 5 S2 AND BILLING? S4 43 AU='RIZZO M':AU='RIZZO N' S5 11 S4 AND (COMMUNICATION?()NETWORK?)

(Item 1 from file: 349) 3/3, K/1DIALOG(R) File 349: PCT FULLTEXT (c) 2004 WIPO/Univentio. All rts. reserv. \*\*Image available\*\* 00865748 NETWORK CHARGING FACTURATION DANS UN RESEAU Patent Applicant/Assignee: BRITISH TELECOMMUNICATIONS PUBLIC LIMITED COMPANY, 81 Newgate Street, London EC1A 7AJ, GB, GB (Residence), GB (Nationality), (For all designated states except: US) Patent Applicant/Inventor: TASSEL Jerome, 60 Benton Street, Hadleigh, Suffolk IP7 5AT, GB, GB (Residence), FR (Nationality), (Designated only for: US) BRISCOE Robert John , Home Farm, Parham, Woodbridge, Suffolk 1P13 9NW, GB, GB (Residence), GB (Nationality), (Designated only for: US Legal Representative: NASH Roger Wiliam (agent), BT Group Legal Services, Intellectual Property Department, Holborn Centre, 8th floor, 120 Holborn, London EC1N 2TE, GB Patent and Priority Information (Country, Number, Date): WO 200199400 A2-A3 20011227 (WO 0199400) Patent: WO 2001GB2676 20010618 (PCT/WO GB0102676) Application: Priority Application: EP 2000305130 20000616 Designated States: CA SG US (EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR Publication Language: English Filing Language: English Fulltext Word Count: 4628 Patent Applicant/Inventor: ... Designated only for: US) BRISCOE Robert John ... Fulltext Availability: Detailed Description Claims Detailed Description NETWORK CHARGING This invention relates to the field of charging users for the use of communications networks , specifically charging users the use of internetworking communications networks . In conventional communications networks , such as national PSTNs

(public switched telephone networks), a significant proportion of the network resources are devoted to metering and billing network usage.

Studies have estimated these resources as consuming as much as 6% of the

...of a telecommunications company. The Internet, by contrast, does not in general incorporate metering and billing mechanisms for individual users. The absence of the network infrastructure required to support metering and billing reduces the operational costs of the Internet compared to conventional telephony networks, and has facilitated the rapid expansion of the Internet . However the absence of appropriate billing mechanisms has significant disadvantages in terms of the characteristics of the traffic carried by the...

...there is provided a method of charging for use by a user terminal of a communications network , the method comprising the steps of.

- (a) creating a tariff for network usage;
- (b) distributing said tariff to a plurality of user terminals connected to the **communications network**, such that one or more of the plurality of the user terminals translates the tariff...
- ...meter rule set for calculating a charge for use by the user terminal of the **communications network**. Preferably the user terminal configures a meter using the generated meter rule set. The tariff...

...network usage;

(b) distributing said tariff to a plurality of user terminals connected to the

## communications network;

- (C) additionally distributing said tariff to a network accounting server, said network accounting server translating...
- ...set for calculating a charge for use by one or more user terminals of the **communications network** . Preferably the network accounting meter configures a meter using the generated meter rule set.

According...

- ...meter rule set for calculating
   a charge for use by a user terminal of the communications network ,
  - (c) distributing said meter rule set to a plurality of user terminals connected to the **communications network**. Preferably the user terminals configure a meter using the received meter rule set.

According to...

...fourth aspect of the invention there is provided a user terminal for connection to a **communications** network, the user terminal

comprising; a network interface which receives, in use, tariff data from the **communications** network; a meter for measuring use by the user terminal of the

communications network ; storage means for storing data received from
the

communications network and network usage data generated by the meter;
and a tariff translator to generate a...

...terminal for use in a network embodying the invention.

As shown in Figure 1, a communications network 1 includes a number of network sub-domains 2A, 2B, 2C. The network sub-domains...

...The network

subdomains are interconnected by gateway routers 3, 4. In the present example

the communications network is the Internet and supports both unicast and

multicast Internet Protocol (IP) and associated protocols...t2(stop time) - tl (start time). However, there exists a difference in session duration for **billing** purposes. Those times should be 5 defined in a per session measurement. They may be...

Claim

A method of charging for use by a user terminal of a communications

network , the method comprising the steps of

- (a) creating a tariff for network usage
- (b) distributing said tariff to a plurality of user terminals connected to

the communications network, and

- (c) translating the tariff to generate a meter rule set for calculating a charge for use by the user terminal of the **communications** network .
- 2 A method according to claim 1 in which the user terminal configures a meter...

...network usage,

- (b) distributing said tariff to a plurality of user terminals connected to
- the communications network,
- (c) additionally distributing said tariff to a network accounting server, said network accounting server translating...
- ...meter rule set for calculating a charge for use by a user terminal of the communications network .
  - 8 A method according to claim 6 in which the network accounting meter configures a...
- ...meter rule set for calculating
  - a charge for use by a user terminal of the **communications** network , and
  - (c) distributing said meter rule set to a plurality of user terminals connected to the **communications** network .
  - 10 A method according to claim 9, in which the user terminals configure a meter using the received meter rule set.
  - 11 A user terminal for connection to a  $\mbox{ communications }$   $\mbox{ network }$  , the user

terminal comprising;

- a network interface which receives, in use, tariff data from the communications network;
- a meter for measuring use by the user terminal of the communications
  network;

storage means for storing data received from the  $% \left( \mathbf{communications}\right)$  network

and network usage data generated by the meter; and a tariff translator to generate a...

### 3/3,K/2 (Item 2 from file: 349)

DIALOG(R) File 349:PCT FULLTEXT

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00533833

COMMUNICATIONS NETWORK

### RESEAU DE COMMUNICATION

Patent Applicant/Assignee:

BRITISH TELECOMMUNICATIONS PUBLIC LIMITED COMPANY,

BRISCOE Robert John,

RIZZO Michael,

Inventor(s):

BRISCOE Robert John ,

RIZZO Michael

Patent and Priority Information (Country, Number, Date):

Patent:

WO 9965185 A2 19991216

Application:

WO 99GB1773 19990604 (PCT/WO GB9901773)

Priority Application: GB 9812161 19980605; EP 98309609 19981124; GB

9825723 19981124; GB 992052 19990129; GB 992648 19990205

Designated States: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT

LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT

UA UG US UZ VN YU ZA ZW GH GM KE LS MW SD SL SZ UG ZW AM AZ BY KG KZ MD

RU TJ TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF

CG CI CM GA GN GW ML MR NE SN TD TG

Publication Language: English

Fulltext Word Count: 9719

COMMUNICATIONS NETWORK

Inventor(s):

BRISCOE Robert John ...

Fulltext Availability:

Detailed Description

Claims

English Abstract

In a **communications network** , loading of network resources is detected locally at a customer terminal, and a tariff for...

Detailed Description

### Communications Network

BACKGROUND TO THE INVENTION

The present invention relates to a **communications network** , and in particular to charging mechanisms in such a network. It includes aspects of the...

...A25547) and the contents of that earlier application are incorporated herein by reference.

In conventional **communications networks**, such as national PSTNs (public

switched telephone networks), a significant proportion of the network resources are devoted to metering and **billing** network usage. Studies have estimated these resources as consuming as much as 6% of the...

...of a telecommunications company. The Internet, by contrast, does not in general incorporate metering and

billing mechanisms for individual customers. The absence of the network 1 5 infrastructure required to support metering and billing reduces the operational costs of the Internet compared to conventional telephony networks, and has facilitated the rapid expansion of the Internet. However, the absence of appropriate billing mechanisms has significant disadvantages in terms of the characteristics of the traffic carried by the...

- ...a first aspect of the present invention, there is provided a method of operating a **communications network**, including automatically varying, depending on network loading as detected at a customer terminal, a tariff ...which the end user is 1 5 merely informed of the price and accounting and **billing** is carried out by the network provider, also in systems where the end user measures...
- ...service. Preferably the explicit congestion signal is carried with a data 5 packet on the **communications network**. Preferably a router in

the network writes an explicit congestion signal in a packet when... weights to different respective applications.

Preferably the method includes distributing a tariff algorithm via the **communicatio**ns network to a plurality of terminals and calculating at each terminal using the tariff a charge...

...a diagram showing an alternative embodiment. DESCRIPTION OF EXAMPLES

As shown in Figure 1, a **communications network** 1 includes a number of network sub-domains 2A-C. The network sub-domains may...

...The network subdomains are interconnected by gateway routers 3, 4. In the present example the **communications network** is the Internet and supports both unicast ...point 85 is also connected to an operational support server 86 that is responsible for **billing** operations, and that, in this example, controls 0 the setting of tariffs for the network... Usage of network resources may be measured locally by the customer terminals instead of conventional **billing** carried out within the network. The network operator may police the measurement of usage data...

### Claim

- 1 A method of operating a **communications network**, including automatically varying, depending on network loading as detected at a customer terminal, a tariff...
- ...according to any one of the preceding claims, including distributing a tariff algorithm via the **communications** network to a plurality of terminals and calculating at each terminal, using the tariff, a charge...
- ...depending on the duration of the said period. 1 3. A method of operating a **communications** network including applying to customer terminals a tariff for network usage, varying the tariff with time said period.
  - 14 A communications network including means for detecting network loading locally at a customer terminal; and means responsive to...
- ...network usage by the customer terminal. 1 5. A customer terminal for use in a **communications network** , the customer terminal including:

means for detecting loading of a network to which, in use... ... for network usage by the customer terminal.

14 A customer terminal for use in a **communications network** , the customer terminal including one or more processors arranged to carry out the following steps...

### 3/3,K/3 (Item 3 from file: 349)

DIALOG(R) File 349: PCT FULLTEXT

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00533832

COMMUNICATIONS NETWORK

## RESEAU DE COMMUNICATION

Patent Applicant/Assignee:

BRITISH TELECOMMUNICATIONS PUBLIC LIMITED COMPANY,

BRISCOE Robert John,
RIZZO Michael,
Inventor(s):
BRISCOE Robert John,
RIZZO Michael
Patent and Priority Info

Patent and Priority Information (Country, Number, Date):

Patent: WO 9965184 A2 19991216

Application: WO 99GB1772 19990604 (PCT/WO GB9901772) Priority Application: GB 9812161 19980605; EP 98309609 19981124; GB 9825723 19981124; GB 992052 19990129; GB 992648 19990205

Designated States: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZA ZW GH GM KE LS MW SD SL SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG

Publication Language: English Fulltext Word Count: 10512

COMMUNICATIONS NETWORK Inventor(s):

BRISCOE Robert John ...
Fulltext Availability:
Detailed Description
Claims

English Abstract

In a **communications network** , which may be a federated data network such as the Internet, use of network resources...

Detailed Description

### COMMUNICATIONS NETWORK

BACKGROUND TO THE INVENTION

The present invention relates to a **communications network** , and in particular to charging mechanisms in such a network. It includes aspects of the...

...1998 and the contents of that earlier application are incorporated herein by reference.

In conventional **communications networks**, such as national PSTNs (public switched telephone networks), a significant proportion of the network resources are devoted to metering and **billing** network usage. Studies have estimated these resources as consuming as much as 6% of the...

- ...a telecommunications company. The Internet, by contrast, does not in general incorporate metering and 5 billing mechanisms for individual customers. The absence of the network infrastructure required to support metering and billing reduces the operational costs of the Internet compared to conventional telephony networks, and has facilitated the rapid expansion of the Internet . However the absence of appropriate billing mechanisms has significant disadvantages in terms of the characteristics of the traffic carried by the...
- ...a first aspect of the present invention, there is provided a method of operating a **communications** network comprising.
  - a) measuring at each of a plurality of customer terminals usage by the the...determine the eligibility of a packet for a respective service

class .

The invention also encompasses **communications networks** arranged to operate by the methods of the invention, and customer terminals, and network accounting...

... Figure 13 shows an alternative embodiment.

## DESCRIPTION OF EXAMPLES

As shown in Figure 1, a **communications network** 1 includes a number of 1 5 network sub-domains 2A-C. The network sub...The network subdomains are

interconnected by gateway routers 3, 4. In the present example the **communications network** is the Internet and supports both unicast and multicast Internet Protocol (IP) and associated protocols...

...variation is described and claimed in the present Applicant's co-pending application also entitled " Communications Network ", BT reference A25793, incorporated herein by ref erence.

A service provider may offer different products...to accommodate different accounting business models including, e.g., pay-as-you-go and traditional **billi**ng .

The frequency may be specified as a period of a number of milliseconds.

- 2. What...point 85 is also connected to an operational support server 86 that is responsible for **billing** operations, and that, in this example, controls the setting of tariffs for the network. The...
- ... Usage of network resources may be measured locally by the customer terminals instead of conventional **billing** carried out within the networlc. 'The network operator may police the measurement of usage data

### Claim

- 1 A method of operating a **communications network** comprising: a) measuring at each of a plurality of customer terminals usage by the respective...
- ...the
   measurement data generated by step (a).
  - 2 A method of operating a federated data **communications network** characterised by measuring at each of a plurality of customer terminals connected to the said...
- ...1 5. A method according to any one of the preceding claims in which the **communications network**0 is a federated data network comprising a plurality of network domains.
  - 1 ...counting the quantity of data communicated in packets transmitted between the customer terminal and the **communications** network . 1 9. A method according to claim 1 8, including measuring both packets received by...
- ...a packet for a respective class of service.

  27 A method of operating a federated **communications network**comprising a

  plurality of network domains, the method including determining a price

  ...of prices corresponding to different respective classes of service.

29 A method of operating a communications network including: (a) establishing a data flow from an originating customer connected to the network to... ...the first and second customers by combining the cost and the apportionment parameter. 32 A **co**mmunications network arranged to operate by a method according anyone of the preceding claims. 33 A... (Item 4 from file: 349) DIALOG(R) File 349: PCT FULLTEXT (c) 2004 WIPO/Univentio. All rts. reserv. 00533831 COMMUNICATIONS NETWORK RESEAU DE COMMUNICATION Patent Applicant/Assignee: BRITISH TELECOMMUNICATIONS PUBLIC LIMITED COMPANY, BRISCOE Robert John, RIZZO Michael, Inventor(s): BRISCOE Robert John , RIZZO Michael Patent and Priority Information (Country, Number, Date): Patent: WO 9965183 A2 19991216 WO 99GB1765 19990604 (PCT/WO GB9901765) Application: Priority Application: GB 9812161 19980605; EP 98309609 19981124; GB 9825723 19981124; GB 992052 19990129; GB 992648 19990205 Designated States: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZA ZW GH GM KE LS MW SD SL SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG Publication Language: English Fulltext Word Count: 11232 COMMUNICATIONS NETWORK Inventor(s): BRISCOE Robert John ... Fulltext Availability: Detailed Description Claims English Abstract In a communications network , which may be a federated network such as the Internet, a tariff is distributed via...

Detailed Description

## Communications Network

The present invention relates to a **communications network**, and in particular to charging mechanisms in such a network.

In conventional communications networks , such as national PSTNs

(public switched telephone networks), a significant proportion of the network resources are devoted to metering and **billing** network usage. Studies have estimated these resources as consuming as much as 6% of the...

### ...of a

- telecommunications company. The Internet, by contrast, does not in general incorporate metering and **billing** mechanisms for individual customers. The absence of the network infrastructure required to support metering and **billing** reduces the operational costs of the Internet compared to conventional telephony networks, and has facilitated the rapid expansion of the Internet . However the absence of appropriate **billing** mechanisms has significant disadvantages in terms of the characteristics of the traffic carried by the...
- ...a first aspect of the present invention, there is provided a method of operating a communications network including distributing a tariff via a communications network to a multiplicity of customer terminals connected to the communications network, and calculating, using the said tariff, a charge for use by the customer terminal of...
- ...a further aspect of the present invention, there is provided a method of operating a communications network including; distributing a tariff via the communications network to a multiplicity of customer terminals connected to the communications network, at a customer terminal measuring use by the customer terminal of network resources; and calculating...

## ...mechanism

suitable for use, for example, in the Internet, or as an alternative to conventional

billing mechanisms in other networks where the terminals have some data processing capabilitites. It removes the burden of metering and billing from the network infrastructure and instead distributes the tariff to the customer terminals, allowing chargesPreferably the tariff algorithm is distributed to the multiplicity of customer terminals via the communications network to which the said tariff applies. In preferred implementations, the charging mechanism is designed to...

- ...at customer terminals. Preferably the method includes operating a plurality of different services on the **communications network**, communicating different tariffs for different respective services to the multiplicity of customer terminals, and selectively...
- ...aspect of the invention may also be used in otherwise conventional networks, for example where **billing** is carried out centrally and tariffs are communicated to the end user only for information...
- ...a further aspect of the present invention, there is provided a method of operating a **communications** network comprising.

operating a plurality of different services on the network; communicating tariffs for the different...

...a further aspect of the present invention, there is provided a method of operating a communications network, including

calculating for each of a multiplicity of customers, using a selected one of a...a further aspect of the present invention, there is provided a method of operating a **communications** network in which at a point of access to the network a single blocking test only...

- ...a further aspect of the present invention, there is provided a method of operating a **communications** network comprising.
  - a) communicating tariff data to a user terminal connected to the network;
  - b) calculating...
- ...a further aspect of the present invention, there is provided a method of operating a **communications** network comprising
  - a) at a customer terminal measuring network usage;
  - b) communicating network usage data from...According to another aspect of the invention, there is provided a method
  - of operating a **communications network** , including automatically varying,
  - depending on network loading as detected at a customer terminal, a tariff
- ...Other aspects of the invention are as described and claimed below. The invention also encompasses **communication networks**, management platforms,
  - routers and customer terminals adapted to operate in accordance with the methods of...
- ...only, with reference to the accompanying drawings, in which.

As shown in Figure 1 , a **communications network** 1 includes a number of network sub-domains 2A-C. The network sub-domains may...

- ...The network subdomains are interconnected by gateway routers 3, 4. In the present example the communications network is the ...point 85 is also connected to an operational support server 86 that is responsible for billing operations, and that, in this example, controls the setting of tariffs for the network. The...
- ... Usage of network resources may be measured locally by the customer terminals instead of conventional **billing** carried out within the network. The network operator may police the measurement of usage data...

### Claim

- 1 A method of operating a **communications network** including distributing a tariff via a **communications network** to a multiplicity of
- customer terminals connected to the  ${\color{red} {\bf communications}}$   ${\color{red} {\bf network}}$  , and calculating using the said tariff a charge for use by the customer terminal of...
- ...in which the tariff algorithm is distributed to the multiplicity of customer terminals via the **communications network** to which the said tariff applies. 1 5 3. A method according to claim 1...
- ...any one of the preceding claims, including operating a plurality of different services on the **communications network**, communicating different tariffs for different respective services to the multiplicity of customer terminals, and selectively...

- ...depending on an operational condition of the respective service.
  - 14 A method of operating a **communications network** comprising: operating a plurality of different services on the network; communicating ...ones of the multiplicity of customer terminals. 1 0 16. A method of operating a **communications network**, including calculating for each of a multiplicity of customers, using a selected one of a...
- ...the plurality of different tariffs have different respective volatilities.
  - 17 A method of operating a  ${\color{red}\mathbf{communications}}$   ${\color{red}\mathbf{network}}$  in which at a point of
  - access to the network a single blocking test only is applied to traffic entering the network .
  - 1 B. A method of operating a communications network comprising:
  - a) communicating tariff data to a user terminal connected to the network;
  - b) calculating...
- ...users and the payment due according to the tariff .
  - 19 A method of operating a communications network comprising;
  - a) establishing contracts between network users and a network operator and storing user contract...
- ...detected.
  - 23 A method according to any one of the preceding claims, in which the **communications network** is a network supporting a packet-based internetworking protocol.
  - 24 A **communications network** arranged to operate by a method according to any one of the preceding claims.

25...

- ... to any one of the preceding claims.
  - $26\ \mbox{A customer terminal for use in a $$ $$ $$ $$ $$ $$ communications $$ $$ $$ $$ network $$, $$ the customer $$$

terminal including;

a network interface which in use receives tariff information via a communications

### network :

- a store programmed with tariff information received at the said interface; a meter for measuring...
- ...using the said tariff information a network usage charge.
  - 27 A method of operating a **communications network** substantially as described 5 with respect to the accompanying drawings and in the accompanying paper.
  - 28 A **communications network** substantially as described with respect to the accompanying drawings and in the accompanying paper.  $1\ 0$
  - 29.A method of operating a communications network comprising
  - a) at a customer terminal measuring network usage;
  - b) communicating network usage data from...
- ...decrypting the said tariff

data at the customer terminal.

31 A method of operating a communications network including; distributing a tariff via the communications network to a multiplicity of customer terminals connected to the communications network , measuring at a customer terminal use by the customer terminal of network resources; and calculating...

...terminal of the network to which the tariff applies.

32 A method of operating a communications network , including automatically varying, depending on network loading as detected at a customer terminal, a tariff...

#### 3/3, K/5(Item 5 from file: 349)

DIALOG(R) File 349: PCT FULLTEXT

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\*\*Image available\*\* 00501872

### DATA COMMUNICATIONS

### COMMUNICATIONS DE DONNEES

Patent Applicant/Assignee:

BRITISH TELECOMMUNICATIONS PUBLIC LIMITED COMPANY,

FAIRMAN Ian Ralph,

BRISCOE Robert John,

Inventor(s):

FAIRMAN Ian Ralph,

## BRISCOE Robert John

Patent and Priority Information (Country, Number, Date):

Patent:

WO 9933224 Al 19990701

WO 98GB3755 19981215 (PCT/WO GB9803755) Application:

Priority Application: EP 97310358 19971219; GB 9726934 19971219; EP

98304429 19980604; GB 9812060 19980604

Designated States: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU

LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA

UG US UZ VN YU ZW GH GM KE LS MW SD SZ UG ZW AM AZ BY KG KZ MD RU TJ TM

AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM

GA GN GW ML MR NE SN TD TG

Publication Language: English

Fulltext Word Count: 7153

## Inventor(s):

### ... BRISCOE Robert John

Fulltext Availability:

Detailed Description

Claims

### English Abstract

...with a different key. The keys are transmitted (for example using Internet multicasting) via a communications network to one or more customer terminals. At the terminals a sequence of keys is generated...

## Detailed Description

... claim a refund. However, while conventional networks, such as the PSTN, incorporate extensive and reliable billing systems which carefully record details of all calls and generate reliable records, no such billing /auditing structure exists within or across the Internet.

Moreover, it would be undesirable to incorporate a conventional **billing** structure in the Internet or any other similar public data network, since this would add...of an

auditable record of the data received by a customer connected to a data
communications network . The data source transmits the data as a
series of ADUs.

These ADUs are typically...

- ...giving access to other services; a 5 multicast stream of messages such as stock prices, communications network prices, electricity prices, network management messages, news items, portfolio information, team briefings, standards documents, academic...b) encryption means for encrypting a plurality of ADUs with different respective keys;
  - C) a communications network connected to the encryption means;
     d) a customer terminal connected to the communications network and arranged to receive encrypted ADUs via the communications network;
     e) key generation means located in the locality of the customer terminal and arranged to...customer terminal.

A data communications system includes a data server 1 connected via a data **communications network** 2 to a number of customer terminal 3. Although for ease of illustration only two...

...data server 1 may communicate simultaneously with many terminals. In the present example, the data **communications network** 2 is the public Internet and is formed from a number of sub-networks 2a...that client application returns the signed string and the signed public key via the data **communications network** to the server. In step S7 the server verifies the signed random string.

As shown...receipt and the response are carried out on-line via the Internet or other appropriate communications network as before.

The examples described above may be used in the context of a community...

### Claim

- ... a plurality of ADUs;
  - b) encryption means for encrypting the plurality of ADUs;
  - c) a communications network connected to the encryption means.
  - d) a customer terminal connected to the communications network and arranged to receive encrypted ADUs via the communications network;
     e) decryption means located in the locality of the customer terminal and arranged to decrypt the ADUs received at the customer terminal from the
  - communications network;
    f) a store at the customer terminal for storing a record of ADUs
  - decrypted
    by...customer terminal.
  - 13 A data communications system according to claim 1 2, in which the communications network is a packet-switched network.
  - 14 A data communications system according to claim 1 2...
- ...b) encryption means for encrypting the plurality of ADUs with different respective keys;

- c) a communications network connected to the encryption means.
- d) a customer terminal connected to the **communications network** and arranged to receive encrypted ADUs via the **communications network**;
- e) a key generator programmed to generate a sequence of keys for use in decrypting...
- ...key generator and arranged to
   decrypt the ADUs received at the customer terminal from the
   communications
   network ; and
  - g) a store for storing a record of keys generated by the key generator... the preceding claims, in which ADU's are communicated to a customer terminal via a  ${\color{red} {\bf communications}}$   ${\color{red} {\bf network}}$  .
  - 33 A method or system according to any one of the preceding claims, including a...

2

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(Item 1 from file: 350)
5/3, K/1
DIALOG(R) File 350: Derwent WPIX
(c) 2004 Thomson Derwent. All rts. reserv.
012944806
             **Image available**
WPI Acc No: 2000-116659/200010
Related WPI Acc No: 2000-105970; 2000-105971
XRPX Acc No: N00-088331
  Service charge management method for public switched telephone network
Patent Assignee: BRITISH TELECOM PLC (BRTE )
Inventor: BRISCOE R J; RIZZO M
Number of Countries: 087 Number of Patents: 005
Patent Family:
                     Date
Patent No
              Kind
                             Applicat No
                                            Kind
                                                    Date
                                                             Week
               A2 19991216
WO 9965183
                             WO 99GB1765
                                             Α
                                                  19990604
                                                            200010
AU 9941575
               Α
                   19991230
                             AU 9941575
                                             Α
                                                  19990604
                                                            200022
EP 1119943
               A2
                   20010801
                             EP 99925195
                                             Α
                                                  19990604
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                                             Α
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CN 1311933
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                                                           200201
JP 2002518882 W
                   20020625
                             WO 99GB1765
                                             Α
                                                  19990604
                                                           200243
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                                             Α
                                                  19990604
Priority Applications (No Type Date): GB 992648 A 19990205; GB 9812161 A
  19980605; EP 98309609 A 19981124; GB 9825723 A 19981124; GB 992052 A
  19990129
Patent Details:
Patent No Kind Lan Pg
                         Main IPC
                                     Filing Notes
WO 9965183
             A2 E 54 H04L-012/00
   Designated States (National): AE AL AM AT AU AZ BA BB BG BR BY CA CH CN
   CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ
   LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK
   SL TJ TM TR TT UA UG US UZ VN YU ZA ZW
   Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR
   IE IT KE LS LU MC MW NL OA PT SD SE SL SZ UG ZW
AU 9941575
                       H04L-012/00
                                     Based on patent WO 9965183
              Α
EP 1119943
              A2 E
                       HO4L-012/14
                                     Based on patent WO 9965183
   Designated States (Regional): BE CH DE ES FR GB IT LI NL SE
CN 1311933
                       H04L-012/14
              Α
JP 2002518882 W
                    67 H04L-012/14
                                     Based on patent WO 9965183
... Inventor: RIZZO M
Abstract (Basic):
           The figure shows schematic view of a communication
                                                                 network .
 5/3, K/2
             (Item 2 from file: 350)
DIALOG(R) File 350: Derwent WPIX
(c) 2004 Thomson Derwent. All rts. reserv.
012934124
             **Image available**
WPI Acc No: 2000-105971/200009
Related WPI Acc No: 2000-105970; 2000-116659
XRPX Acc No: N00-081383
   Communication
                   network operating method e.g. for public switched
  telephone network
Patent Assignee: BRITISH TELECOM PLC (BRTE )
Inventor: BRISCOE R J; RIZZO M
Number of Countries: 087 Number of Patents: 005
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Patent Family:
Patent No
              Kind
                     Date
                             Applicat No
                                            Kind
                                                    Date
                                                             Week
                             WO 99GB1773
                                                            200009
WO 9965185
              A2 19991216
                                             Α
                                                  19990604
AU 9941581
               Α
                   19991230
                             AU 9941581
                                             Α
                                                  19990604
                                                            200022
EP 1123604
               Α2
                  20010816
                            EP 99925201
                                             Α
                                                  19990604
                                                            200147
                             WO 99GB1773
                                             Α
                                                  19990604
CN 1310651
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                   20010829
                             CN 99808868
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                                                  19990604
                                                            200176
JP 2002518884
              W
                   20020625
                             WO 99GB1773
                                             Α
                                                  19990604
                                                           200243
                             JP 2000554090
                                                  19990604
Priority Applications (No Type Date): GB 992648 A 19990205; GB 9812161 A
  19980605; EP 98309609 A 19981124; GB 9825723 A 19981124; GB 992052 A
  19990129
Patent Details:
Patent No Kind Lan Pg
                         Main IPC
                                     Filing Notes
              A2 E 49 H04L-012/00
   Designated States (National): AE AL AM AT AU AZ BA BB BG BR BY CA CH CN
   CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ
   LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK
   SL TJ TM TR TT UA UG US UZ VN YU ZA ZW
   Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR
   IE IT KE LS LU MC MW NL OA PT SD SE SL SZ UG ZW
AU 9941581
              Α
                       H04L-012/00
                                     Based on patent WO 9965185
EP 1123604
              A2 E
                       H04L-012/14
                                     Based on patent WO 9965185
   Designated States (Regional): BE CH DE ES FR GB IT LI NL SE
                       B23K-020/16
CN 1310651
             Α
JP 2002518884 W
                    60 H04L-012/14
                                     Based on patent WO 9965185
   Communication network operating method e.g. for public switched
  telephone network
... Inventor: RIZZO M
            (Item 1 from file: 348)
 5/3,K/3
DIALOG(R) File 348: EUROPEAN PATENTS
(c) 2004 European Patent Office. All rts. reserv.
01521728
 COMMUNICATIONS
                  NETWORK
KOMMUNIKATIONSNETZWERK
RESEAU DE COMMUNICATIONS
PATENT ASSIGNEE:
  BRITISH TELECOMMUNICATIONS public limited company, (846100), 81 Newgate
    Street, London EC1A 7AJ, (GB), (Applicant designated States: all)
INVENTOR:
  RUDKIN, Steven, 52 Corder Road, Ipswich Suffolk IP4 2XD, (GB)
   RIZZO, Michael , 12 Dewar Lane Kesgrave, Ipswich Suffolk IP5 2GT, (GB)
  CARVER, Andrew, Richard, Bayswater Mill House Bayswater Mill Road, Oxford
   Oxon OX3 9SB, (GB
LEGAL REPRESENTATIVE:
  Nash, Roger William et al (87681), BT Group Legal Services, Intellectual
    Property Department, 8th Floor, 120 Holborn, London EC1N 2TE, (GB)
PATENT (CC, No, Kind, Date): EP 1380147 A1 040114 (Basic)
                              WO 2002087193 021031
                              EP 2002718369 020419; WO 2002GB1824
APPLICATION (CC, No, Date):
                                                                    020419
PRIORITY (CC, No, Date): EP 2001303599 010419
DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI;
  LU; MC; NL; PT; SE; TR
EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI
INTERNATIONAL PATENT CLASS: H04L-029/06
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NOTE:

No A-document published by EPO LANGUAGE (Publication, Procedural, Application): English; English; English COMMUNICATIONS NETWORK INVENTOR: ... GB) RIZZO, Michael ... 5/3, K/4(Item 2 from file: 348) DIALOG(R) File 348: EUROPEAN PATENTS (c) 2004 European Patent Office. All rts. reserv. 01118428 COMMUNICATIONS NETWORK WITH TARIFF BASED ON NETWORK LOAD KOMMUNIKATIONSNETZ MIT EINEM TARIFF AUF BASIS VON DER NETZBELASTUNG RESEAU DE COMMUNICATION PATENT ASSIGNEE: BRITISH TELECOMMUNICATIONS public limited company, (846100), 81 Newgate Street, London EC1A 7AJ, (GB), (Applicant designated States: all) INVENTOR: BRISCOE, Robert John, Home Farm Parham, Woodbridge, Suffolk IP13 9NW, RIZZO, Michael , 12 Dewar Lane Kesgrave, Ipswich, Suffolk IP5 2GJ, (GB LEGAL REPRESENTATIVE: Williamson, Simeon et al (87202), BT Group Legal Services, Intellectual Property Department, 8th Floor, 120 Holborn, London, EC1N 2TE, (GB) PATENT (CC, No, Kind, Date): EP 1123604 A2 010816 (Basic) WO 9965185 991216 APPLICATION (CC, No, Date): EP 99925201 990604; WO 99GB1773 990604 PRIORITY (CC, No, Date): GB 9812161 980605; EP 98309609 981124; GB 9825723 981124; GB 9902052 990129; GB 9902648 990205 DESIGNATED STATES: BE; CH; DE; ES; FR; GB; IT; LI; NL; SE INTERNATIONAL PATENT CLASS: H04L-012/14; H04L-012/56; H04Q-003/00 NOTE: No A-document published by EPO LANGUAGE (Publication, Procedural, Application): English; English; English COMMUNICATIONS NETWORK WITH TARIFF BASED ON NETWORK LOAD INVENTOR: ... GB) RIZZO, Michael ... 5/3.K/5 (Item 3 from file: 348) DIALOG(R) File 348: EUROPEAN PATENTS (c) 2004 European Patent Office. All rts. reserv. 01118427 ACCOUNTING IN A COMMUNICATIONS NETWORK BUCHHALTUNG IN EINEM KOMMUNIKATIONSNETZ RESEAU DE COMMUNICATION PATENT ASSIGNEE: BRITISH TELECOMMUNICATIONS public limited company, (846100), 81 Newgate Street, London EC1A 7AJ, (GB), (Applicant designated States: all) INVENTOR: BRISCOE, Robert, John, Home Farm, Parham, Woodbridge, Suffolk IP13 9NW,

RIZZO, Michael , 12 Dewar Lane, Kesgrave, Ipswich, Suffolk IP5 2GJ, (GB

LEGAL REPRESENTATIVE:

Williamson, Simeon et al (87202), BT Group Legal Services, Intellectual Property Department, 8th Floor, 120 Holborn, London, EC1N 2TE, (GB) PATENT (CC, No, Kind, Date): EP 1119944 A2 010801 (Basic) WO 9965184 991216 APPLICATION (CC, No, Date): EP 99925200 990604; WO 99GB1772 990604 PRIORITY (CC, No, Date): GB 9812161 980605; EP 98309609 981124; GB 9825723 981124; GB 9902052 990129; GB 9902648 990205 DESIGNATED STATES: BE; CH; DE; ES; FR; GB; IT; LI; NL; SE INTERNATIONAL PATENT CLASS: H04L-012/14; H04L-012/56; H04Q-003/00; H04L-012/24; H04M-015/30 NOTE: No A-document published by EPO LANGUAGE (Publication, Procedural, Application): English; English; English ACCOUNTING IN A COMMUNICATIONS NETWORK INVENTOR: GB) RIZZO, Michael ... (Item 4 from file: 348) 5/3, K/6DIALOG(R) File 348: EUROPEAN PATENTS (c) 2004 European Patent Office. All rts. reserv. 01118426 ACCOUNTING IN A COMMUNICATIONS NETWORK BUCHHALTUNG IN EINEM KOMMUNIKATIONSNETZ RESEAU DE COMMUNICATION PATENT ASSIGNEE: BRITISH TELECOMMUNICATIONS public limited company, (846104), 81 Newgate Street, London EC1N 7AJ, (GB), (Applicant designated States: all) BRISCOE, Robert, John, Home Farm Parham, Woodbridge Suffolk 1P13 9NW, (GB) RIZZO, Michael , 12 Dewar Lane Kesgrave, Ipswich Suffolk IP5 2GJ, (GB LEGAL REPRESENTATIVE: Williamson, Simeon et al (87202), BT Group Legal Services, Intellectual Property Department, 8th Floor, 120 Holborn, London, EC1N 2TE, (GB) PATENT (CC, No, Kind, Date): EP 1119943 A2 010801 (Basic) WO 9965183 991216 EP 99925195 990604; WO 99GB1765 990604 APPLICATION (CC, No, Date): PRIORITY (CC, No, Date): GB 9812161 980605; EP 98309609 981124; GB 9825723 981124; GB 9902052 990129; GB 9902648 990205 DESIGNATED STATES: BE; CH; DE; ES; FR; GB; IT; LI; NL; SE INTERNATIONAL PATENT CLASS: H04L-012/14; H04L-012/56; H04Q-003/00; H04L-012/24; H04M-015/28 NOTE: No A-document published by EPO LANGUAGE (Publication, Procedural, Application): English; English; English ACCOUNTING IN A COMMUNICATIONS NETWORK INVENTOR: ... GB) RIZZO, Michael ...

5/3,K/7 (Item 1 from file: 349) DIALOG(R)File 349:PCT FULLTEXT

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Search Performed by Sylvia Keys 30-Mar-04

00953005 \*\*Image available\*\* COMMUNICATIONS NETWORK RESEAU DE COMMUNICATIONS Patent Applicant/Assignee: BRITISH TELECOMMUNICATIONS public limited company, 81 Newgate Street, London EC1A 7AJ, GB, GB (Residence), GB (Nationality), (For all designated states except: US) Patent Applicant/Inventor: RUDKIN Steven, 52 Corder Road, Ipswich, Suffolk IP4 2XD, GB, GB (Residence), GB (Nationality), (Designated only for: US) RIZZO Michael , 12 Dewar Lane, Kesgrave, Ipswich, Suffolk IP5 2GT, GB, GB (Residence), MT (Nationality), (Designated only for: US) CARVER Andrew Richard, Bayswater Mill House, Bayswater Mill Road, Oxford, Oxon OX3 9SB, GB, GB (Residence), GB (Nationality), (Designated only for: US Legal Representative: NASH Roger William (agent), BT Group Legal Services, Intellectual Property Department, Holborn Centre, 8th Floor, 120 Holborn, London EC1N 2TE, GB, Patent and Priority Information (Country, Number, Date): Patent: WO 200287193 A1 20021031 (WO 0287193) Application: WO 2002GB1824 20020419 (PCT/WO GB0201824) Priority Application: EP 2001303599 20010419 Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW (EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR (OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG (AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW (EA) AM AZ BY KG KZ MD RU TJ TM Publication Language: English Filing Language: English Fulltext Word Count: 6951 COMMUNICATIONS NETWORK Patent Applicant/Inventor: ... Designated only for: US) RIZZO Michael ... Fulltext Availability:

Detailed Description

Claims

# English Abstract

A method of providing personalised content over a **communications network** such as the Internet is disclosed. Providing personalised content includes both generating content which depends...

# Detailed Description

# COMMUNICATIONS NETWORK

Since the first release of the Mosaic Web browser in 1993, use of the Internet...to one aspect of the present invention, there is provided a method of operating a **communications** network comprising a remote network in communication with a local network, said method comprising.

transmitting content...a first aspect of the present invention there is provided a method of operating a **communications network** comprising a remote network in communication with a local network, said method comprising.

transmitting content...

A method of operating a communications network comprising a remote network in communication with a local network, said method comprising: transmitting content...further depending upon prices offered by said local network.

9 A method of operating a **communications network** comprising a remote

in communication with a local network, said method comprising: transmitting content...provision step comprises generating said content data in accordance with said communication attributes.

10 A communications network comprising a remote network in communication

with a local network, said network comprising:

policy transmission...a plurality of qualities of delivery selected in accordance with said parameters. 1 1. A communication network according to claim 10 wherein said local network 1 5 comprises a datagram network. 1 2. A communication network according to claim 1 1 wherein said datagram

network comprises:

datagram marking means arranged in...the quality of said delivery to be in accordance with said parameters. 1 3. A communication according to claim 1 1 wherein said datagram network comprises:

datagram scheduling means arranged in...

#### 5/3,K/8 (Item 2 from file: 349)

DIALOG(R) File 349: PCT FULLTEXT

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00865706 \*\*Image available\*\*

# PROTOCOL FOR MULTICAST COMMUNICATION

# PROTOCOLE POUR COMMUNICATIONS A MULTIDESTINATION

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(EA) AM AZ BY KG KZ MD RU TJ TM

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Patent Applicant/Inventor:
RIZZO Michael ...
Fulltext Availability:
Detailed Description
Claims

### English Abstract

...efficient dissemination of information to multiple recipients over one or more communication channels in a **communications network**, for instance the multicast Internetwork. The method comprises the steps of: defining at least one...

# Detailed Description

# ... MULTICAST COMMUNICATION

This invention relates to a communications transport protocol for transmitting data in a **communications network** and in particular to a method, data 5 processing system and software application program for transmitting, receiving or transmitting and receiving data over a multicast enabled **communications network**.

Traditional methods of information retrieval include the client/server request-response transaction model where a...first aspect of the invention there is provided a method of transmitting data in a communications network, said method comprising the steps of:i) defining at least one primary data set for transmission over a primary communications channel in a communications network; the or each primary data set comprising data relating to a secondary data set associated...invention there is provided a software application program for processing data for transmission over a communications network; wherein said program is arranged to: define at least one primary data set for transmission over at least one primary communications channel in a communications network; the or each

primary data set comprising data relating to at least one secondary data  $\dots$ 

- ...aspect of the invention there is provided a method of accessing data transmitted over a **communications** network; said method comprising the steps of:
  - i) receiving at least one primary data set transmitted over a primary communications channel in a **communications network**, the or each primary data set comprising data relating to at least one secondary data ...
- ...invention there is provided a software application program for processing data for transmission over a **communications network**; wherein said program is arranged to: receive at least one primary data set transmitted over a primary communications channel in a **communications network**, the or each primary data set comprising data relating to at least one secondary data ...C and Figures 9a-d involving an appropriement being edited and

and Figures 9a-d involving an announcement being edited and re-transmitted over a **communications** network .

An example of an IP multicast transmission system used in one arrangement of the invention...

...SHEET (RULE 26)

components 200, 202, 204 and 206 may be positioned anywhere in a communications network but typically the receivers 204 and sinks 206 are

positioned at network end points provided...

#### Claim

SUBSTITUTE SHEET (RULE 26)

- 1 A method of transmitting data in a **communications network** said method comprising the steps of:
- i) defining at least one primary data set for transmission over at least one primary communications channel in a communications network; the or

each primary data set comprising data relating to at least one secondary data...

...multicast channel.

1 2. A software application program for processing data for transmission over a **c**ommunications network; wherein said program is arranged to: SUBSTITUTE SHEET (RULE 26)

define at least one primary data set for transmission over at least one primary communications channel in a **communications network**; the or

each primary data set comprising data relating to at least one secondary data...

...data set or sets.

- 5 1 3. A method of accessing data transmitted over a **communications** network; said method comprising the steps of:
- i) receiving at least one primary data set transmitted over a primary communications channel in a  ${\color{red}\mathbf{communications}}$   ${\color{red}\mathbf{network}}$  , the or each primary

data set comprising data relating to at least one secondary data...

...being modified.

1 7. A software application program for processing data for transmission over a **communications network**; wherein said program is arranged to: receive at least one primary data set transmitted over a primary 1 5 communications channel in a **communications network**, the or each primary

data set comprising data relating to at least one secondary data...

# 5/3,K/9 (Item 3 from file: 349)

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00533833

COMMUNICATIONS NETWORK

# RESEAU DE COMMUNICATION

Patent Applicant/Assignee:

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BRISCOE Robert John,

RIZZO Michael,

Inventor(s):

BRISCOE Robert John,

RIZZO Michael

Patent and Priority Information (Country, Number, Date):

Patent: WO 9965185 A2 19991216

Application: WO 99GB1773 19990604 (PCT/WO GB9901773)

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UA UG US UZ VN YU ZA ZW GH GM KE LS MW SD SL SZ UG ZW AM AZ BY KG KZ MD

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CG CI CM GA GN GW ML MR NE SN TD TG

Publication Language: English

Fulltext Word Count: 9719

COMMUNICATIONS NETWORK

Inventor(s):

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... RIZZO Michael

Culltant Amailability

Fulltext Availability:

Detailed Description

Claims

English Abstract

In a **communications network**, loading of network resources is detected locally at a customer terminal, and a tariff for...

Detailed Description

# Communications Network

BACKGROUND TO THE INVENTION

The present invention relates to a **communications network** , and in particular to charging mechanisms in such a network. It includes aspects of the...

...A25547) and the contents of that earlier application are incorporated herein by reference.

In conventional **communications networks**, such as national PSTNs (public

switched telephone networks), a significant proportion of the network resources...

...a first aspect of the present invention, there is provided a method of operating a **communications network**, including automatically varying, depending on network loading as detected at a customer terminal, a tariff ...service. Preferably the explicit congestion signal is carried with a data 5 packet on the **communications network**. Preferably a router in the network writes an explicit congestion signal in a packet when... weights to different respective applications.

Preferably the method includes distributing a tariff algorithm via the communications network to a plurality of terminals and calculating at each terminal using the tariff a charge...

...a diagram showing an alternative embodiment.

# DESCRIPTION OF EXAMPLES

As shown in Figure 1, a **communications** network 1 includes a number of network sub-domains 2A-C. The network sub-domains may...

... The network subdomains are interconnected by gateway routers 3, 4. In the present example the **communications** network is the Internet and

supports both unicast

#### Claim

- 1 A method of operating a **communications network**, including automatically varying, depending on network loading as detected at a customer terminal, a tariff...
- ...according to any one of the preceding claims, including distributing a tariff algorithm via the **communications network** to a plurality of terminals and calculating at each terminal, using the tariff, a charge...
- ...depending on the duration of the said period. 1 3. A method of operating a **communications** network including applying to customer terminals a tariff for network usage, varying the tariff with time said period.
  - 14 A communications network including means for detecting network loading locally at a customer terminal; and means responsive to...
- ...network usage by the customer terminal. 1 5. A customer terminal for use in a **communications network**, the customer terminal including:
  means for detecting loading of a network to which, in use...
- ...for network usage by the customer terminal.
  - 14 A customer terminal for use in a  ${\tt communications}$   ${\tt network}$  , the customer terminal including one or more processors arranged to carry out the following steps...

# 5/3,K/10 (Item 4 from file: 349)

DIALOG(R) File 349: PCT FULLTEXT

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00533832

COMMUNICATIONS NETWORK

# RESEAU DE COMMUNICATION

Patent Applicant/Assignee:

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RIZZO Michael,

Inventor(s):

BRISCOE Robert John,

# RIZZO Michael

Patent and Priority Information (Country, Number, Date):

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UA UG US UZ VN YU ZA ZW GH GM KE LS MW SD SL SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF

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COMMUNICATIONS NETWORK

Inventor(s):

# RIZZO Michael

Fulltext Availability: Detailed Description Claims

# English Abstract

In a **communications network**, which may be a federated data network such as the Internet, use of network resources...

# Detailed Description

# COMMUNICATIONS NETWORK

BACKGROUND TO THE INVENTION

The present invention relates to a **communications network** , and in particular to charging mechanisms in such a network. It includes aspects of the...

...1998 and the contents of that earlier application are incorporated herein by reference.

In conventional communications networks, such as national PSTNs (public

switched telephone networks), a significant proportion of the network resources...

- ...a first aspect of the present invention, there is provided a method of operating a **communications** network comprising.
- a) measuring at each of a plurality of customer terminals usage by the the...determine the eligibility of a packet for a respective service class.

The invention also encompasses **communications networks** arranged to operate by the methods of the invention, and customer terminals, and network accounting...

... Figure 13 shows an alternative embodiment.

# DESCRIPTION OF EXAMPLES

As shown in Figure 1, a **communications network** 1 includes a number of 1 5 network sub-domains 2A-C. The network sub...The network subdomains are

interconnected by gateway routers 3, 4. In the present example the communications network is the Internet and supports both unicast and multicast Internet Protocol (IP) and associated protocols...

...variation is described and claimed in the present Applicant's co-pending application also entitled " Communications Network ", BT reference A25793, incorporated herein by ref erence.

A service provider may offer different products...

### Claim

- 1 A method of operating a **communications network** comprising: a) measuring at each of a plurality of customer terminals usage by the respective...
- ...the

measurement data generated by step (a).

- a ar in
- 2 A method of operating a federated data communications network characterised by measuring at each of a plurality of customer terminals connected to the said ...
- ...1 5. A method according to any one of the preceding claims in which the communications network is a federated data network comprising a plurality of network domains.
  - ...counting the quantity of data communicated in packets transmitted between the customer terminal and the communications network . 1 9. A method according to claim 1 8, including measuring both packets received by ...
- ...a packet for a respective class of service. 27 A method of operating a federated communications network comprising a plurality of network domains, the method including determining a price ... of prices corresponding to different respective classes of service.
  - 29 A method of operating a communications network including: (a) establishing a data flow from an originating customer connected to the network to...
- ...the first and second customers by combining the cost and the apportionment parameter.
  - 32 A communications **network** arranged to operate by a method according anyone of the preceding claims.

33 A...

#### (Item 5 from file: 349) 5/3,K/11 DIALOG(R) File 349: PCT FULLTEXT

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00533831

COMMUNICATIONS NETWORK

# RESEAU DE COMMUNICATION

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Inventor(s):

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## RIZZO Michael

Patent and Priority Information (Country, Number, Date):

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Priority Application: GB 9812161 19980605; EP 98309609 19981124; GB

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LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT

UA UG US UZ VN YU ZA ZW GH GM KE LS MW SD SL SZ UG ZW AM AZ BY KG KZ MD

RU TJ TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF

CG CI CM GA GN GW ML MR NE SN TD TG

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COMMUNICATIONS NETWORK
Inventor(s):
... RIZZO Michael
Fulltext Availability:
Detailed Description
Claims

# English Abstract

In a **communications network**, which may be a federated network such as the Internet, a tariff is distributed via...

### Detailed Description

#### Communications Network

The present invention relates to a **communications** network , and in particular to charging mechanisms in such a network.

In conventional **communications networks**, such as national PSTNs (public switched telephone networks), a significant proportion of the network resources...

- ...a first aspect of the present invention, there is provided a method of operating a communications network including distributing a tariff via a communications network to a multiplicity of customer terminals connected to the communications network, and calculating, using the said tariff, a charge for use by the customer terminal of...
- ...a further aspect of the present invention, there is provided a method of operating a communications network including; distributing a tariff via the communications network to a multiplicity of customer terminals connected to the communications network, at a customer terminal measuring use by the customer terminal of network resources; and calculatingPreferably the tariff algorithm is distributed to the multiplicity of customer terminals via the communications network to which the said tariff applies. In preferred implementations, the charging mechanism is designed to...
- ...at customer terminals. Preferably the method includes operating a plurality of different services on the **communications network**, communicating different tariffs for different respective services to the multiplicity of customer terminals, and selectively...
- ...a further aspect of the present invention, there is provided a method of operating a **communications network** comprising.

operating a plurality of different services on the network; communicating tariffs for the different...

...a further aspect of the present invention, there is provided a method of operating a communications network, including calculating for each of a multiplicity of customers, using a selected one of a...a further aspect of the present invention, there is provided a method of operating a communications network in which at a point of access to the network a single blocking test only...

- ...a further aspect of the present invention, there is provided a method of operating a **communications network** comprising.
  - a) communicating tariff data to a user terminal connected to the network;
  - b) calculating...
- ...a further aspect of the present invention, there is provided a method of operating a **communications** network comprising
  - a) at a customer terminal measuring network usage;
  - b) communicating network usage data from...According to another aspect of the invention, there is provided a method
  - of operating a **communications network** , including automatically varying,
  - depending on network loading as detected at a customer terminal, a tariff  $\dots$
- ...Other aspects of the invention are as described and claimed below. The invention also encompasses **communication networks**, management platforms, routers and customer terminals adapted to operate in accordance with the
  - routers and customer terminals adapted to operate in accordance with the methods of ...
- ...only, with reference to the accompanying drawings, in which.
  - As shown in Figure 1 , a **communications network** 1 includes a number of network sub-domains 2A-C. The network sub-domains may...
- ... The network subdomains are interconnected by gateway routers 3, 4. In the present example the communications network is the

## Claim

- 1 A method of operating a communications network including distributing a tariff via a communications network to a multiplicity of
- customer terminals connected to the  ${\color{blue} {\bf communications}}$   ${\color{blue} {\bf network}}$  , and calculating using the said tariff a charge for use by the customer terminal of...
- ...in which the tariff algorithm is distributed to the multiplicity of customer terminals via the **communications network** to which the said tariff applies. 1 5 3. A method according to claim 1...
- ...any one of the preceding claims, including operating a plurality of different services on the **communications network**, communicating different tariffs for different respective services to the multiplicity of customer terminals, and selectively...
- ...depending on an operational condition of the respective service.
  - 14 A method of operating a **communications network** comprising: operating a plurality of different services on the network; communicating ...ones of the multiplicity of customer terminals. 1 0 16. A method of operating a **communications network**, including calculating for each of a multiplicity of customers, using a selected one of a...
- ...the plurality of different tariffs have different respective volatilities.

- 17 A method of operating a  ${\color{red}\mathbf{communications}}$   ${\color{red}\mathbf{network}}$  in which at a point of
- access to the network a single blocking test only is applied to traffic entering the network .
- 1 B. A method of operating a communications network comprising:
- a) communicating tariff data to a user terminal connected to the network;
- b) calculating...
- ...users and the payment due according to the tariff .
  - 19 A method of operating a **communications network** comprising; a) establishing contracts between network users and a network operator and storing user contract...
- ...detected.
  - 23 A method according to any one of the preceding claims, in which the communications network is a network supporting a packet-based internetworking protocol.
  - 24 A **communications network** arranged to operate by a method according to any one of the preceding claims. 25...
- ...to any one of the preceding claims.
  - $26\ \mbox{A customer terminal for use in a $$ $$ $$ $$ $$ $$ communications $$ $$ $$ network $$, $$ the customer $$$

terminal including;

a network interface which in use receives tariff information via a communications

### network ;

- a store programmed with tariff information received at the said interface; a meter for measuring...
- ...using the said tariff information a network usage charge.
  - 27 A method of operating a **communications network** substantially as described 5 with respect to the accompanying drawings and in the accompanying paper.
  - 28 A **communications network** substantially as described with respect to the accompanying drawings and in the accompanying paper. 1  $\,0$
  - 29.A method of operating a communications network comprising
  - a) at a customer terminal measuring network usage;
  - b) communicating network usage data from...
- ...decrypting the said tariff data at the customer terminal.
  - 31 A method of operating a **communications network** including; distributing a tariff via the **communications network** to a multiplicity of customer terminals connected to the **communications network**,

customer terminals connected to the **communications network**, measuring at a customer terminal use by the customer terminal of network resources; and calculating...

...terminal of the network to which the tariff applies.

32 A method of operating a **communications network** , including automatically varying, depending on network loading as detected at a customer terminal, a tariff...